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ORIGINAL DEPARTMENT.

COMMUNICATIONS.

THE SUMMER DISEASES OF CHILDREN.

BY WILLIAM B. ATKINSON, A.M., M.D.,

Lecturer on Diseases of Children, Jefferson Medical College, Philadelphia.

(*Continued from p. 83.*)

Next in frequency of occurrence is the ordinary diarrhœa, which is more commonly seen in children who have passed the second year. This is almost invariably the sequence of the ingestion of improper food, or the result of surfeiting. Exposure to cold, or in damp, ill-ventilated apartments, excessive heat, or the irritation of worms, or of teething, alike may cause too frequent discharges from the bowels.

As there can result nothing but confusion from the division of this disease, or rather symptom of disease, according to the plan of some writers, we shall be content to treat of it under two heads:—

First, simple, or non-inflammatory diarrhœa; and second, the more dangerous inflammatory form.

It is well at the outset for the physician to know something of the natural condition of his case, in relation to the frequency of its evacuations from the bowels. What would constitute a diarrhœa in one child would be but the normal state of another. We consequently encounter cases where children have several evacuations in the twenty-four hours, and yet thrive under this condition. Such cases are not subjects for medical interference.

The ordinary healthy infant usually has from four to six alvine dejections in each twenty-four hours, of slight odor, and the color and consistence of mustard paste. But as soon as it is weaned a change occurs, and it soon drops down to two, or at most three, evacuations in the same time. Children eating at the table, and between meals almost as much, might readily be expected to average the same number, but, unfortunately, after they escape from the immediate necessity for close attention on the part of the mother, in the vast number of instances they are systematically, or perhaps necessarily, neglected. The demands of the new baby, the household, the work by which to procure food and shelter, all combine to throw the little ones upon their own resources. They in turn become absorbed in play, and neglect or resist the calls of nature, and she either yields and only enforces her demands at longer and longer intervals, or, enraged, sets up a diarrhœa which will brook no delay.

The symptoms of the approach of diarrhœa are almost as various as its causes. Thus, a child is restless, starts in its sleep, occasionally whimpers or cries out, as from pain, and finally awakes suddenly, with an evacuation more or less profuse, which is repeated at short intervals. Or, without other disturbance, the passages become thin, and more and more frequent, until its weakness and evident exhaustion demand relief.

The stools at first, except in quite young infants, are generally of the natural color, but more watery. In nursing children they are usually of a greenish color, and contain more or less curdy particles from the milk. Here, too, they are frequently quite acid, which more rarely

occurs in older children. At first, pain is wanting, or but slight, and felt just at the moment of the evacuation, which seems to relieve it, but as the disease progresses the pain is apt to increase; rarely, however, amounting to tormina, except when there is great acidity of the discharges. In this condition a burning pain is felt, especially about the anus, and after a number of these acid passages, the scalding of the parts becomes a source of terrible annoyance and distress.

The thirst and appetite vary. At first there is but little desire for drinks, and the want of appetite, if at all noticed, is attributed to the heat, etc. As the disease progresses, and the watery part of the blood begins to be lessened by the excessive discharges from the bowels, nature demands a supply of fluid to maintain the normal condition, and the thirst becomes a prominent symptom. In severe cases the pallor of the face, the pinched features, the loss of flesh, the great feebleness of the movements give evidence of the grave nature of the disease. At this stage it frequently passes suddenly into cholera infantum, or assumes the inflammatory form. Occasionally, it continues without change and becomes chronic.

The color and general appearance of the discharges vary according to the cause of the attack. When the disease is the result of over-feeding, or the use of improper articles of food, the attack is often heralded by vomiting, or futile efforts to relieve the stomach of the offending matters; this is followed by sharp pains; there is acid breath, great pallor, and an appearance of sudden and great debility. When the bowels begin to act, the evacuations are at first lumpy, curdy, generally very acid, mixed with portions of undigested food, varying in color, usually of a light yellow, soon becoming greenish. After several passages, they become very thin and are ejected with painful efforts. Should the trouble not be relieved by the removal of the cause, digestion speedily seems to have entirely stopped, and all the ingesta pass unchanged, great emaciation follows, and the child dies from exhaustion.

It must be remembered that certain kinds of food which are usually regarded as proper for children, are sure to disagree in particular cases. For this reason, great care should be taken to observe the effect of the diet, and it will soon be seen what food is sure to produce bad results.

Cold and dampness generally causes very thin, watery, or mucous discharges, with much complaint of soreness of the abdomen.

When the diarrhœa is the result of heat, and bad hygienic surroundings, or is caused by dentition, the early discharges are merely as a looseness of the bowels, very feculent, and coming almost without warning; but soon they lose any distinctive character, and resemble those which result from any other cause.

In very early infancy much may be done to prevent these alimentary troubles. Nurses, young mothers, all who have the care of infants, should be taught to recognize the importance of avoiding every kind of food for the child but the breast milk. We cannot too strongly urge this, as we constantly find the infant fed, from the very first hours of life, with the most injurious messes. Catnip tea is perhaps the most commonly employed, combining, as is foolishly thought, the virtues of food and medicine; food to prevent it starving, and medicine to cleanse the bowels. We must impress upon nurses and mothers, with the most positive earnestness, the fact that nature provides the food and medicine most appropriate at this period. Let the child be applied to the breast so soon as the mother has had time to rest and recover a little from the excitement and exhaustion of her delivery. This may be in one, two, or even six hours. In the meantime, give nothing whatever to the child; it needs nothing. By this plan we find the infant more ready to seize upon the nipple, and thus provoke the mammary gland to a proper performance of its functions. When the secretion occurs (the breast may already have commenced this duty) the first milk is that which is best suited to the needs of the child, containing, as it does, the colostrum which acts as a gentle purgative to cleanse away the meconium. Usually, by the third day the true milk is abundantly secreted, and all goes on as it should.

But when, as on the contrary we so constantly find, the child is dosed with food rarely appropriate to its age, or medicine, which is always improper, we have set in motion a train which rarely fails to carry it on to disease and often to death. Diarrhœa is the almost invariable result of this well-meant but dangerous treatment.

The above will show one means of prophylaxis. At a later stage the disease may be prevented by a proper regimen, the strict avoidance of unripe or over-ripe fruits, watchfulness as to food which is frequently followed by bowel trouble, no matter how healthy such food may seem to be with others, care to avoid sudden changes of temperature, or exposure to heat or exhausting exercise, etc.

The treatment of non-inflammatory diarrhœa will be first and of most importance to remove the cause or causes, if they can be ascertained and removed. In many instances, when the disease is in its incipiency, this is all that is required; the bowels being relieved of the cause of irritation soon return to their normal condition.

In certain instances of nursing children, diarrhœa of a very intractable form persists without apparent cause; this, however, is speedily recognized on examination of the milk, which is found to contain a large portion of colostrum. In such cases the only method of relief will be the substitution of another wet nurse, or failing in that, the employment of cow's milk.

When the case is seen early, and the symptoms lead to the belief that the attack is the result of the presence of indigestible or undigested matter in the bowels, for either, being a foreign body, acts as an irritant, a small dose of castor oil, of calcined magnesia, or of the spiced syrup of rhubarb may be given, with the view of expelling such matters. It is rarely necessary to continue, or even to repeat these remedies. With a proper regulation of the diet, of the hygienic conditions, etc., in very many cases, the attack ceases, and no further medication is requisite; or a few doses of aromatic powder, v–x grs. every two hours, will complete the cure. Should the looseness of the bowels continue, it becomes necessary to employ an astringent; an alkali if there is much acidity; and some form of narcotic to relieve pain.

Of astringents, catechu, kino, and logwood are most frequently employed.

As antacids, we have bicarbonate of soda, or potassa, lime water, chalk mixture, and bismuth.

Perhaps no formula can be employed with better result, in the great majority of cases, than one combining the subnitrate of bismuth with the compound powder of ipecacuanha.

For a child, one year old, we may give—

℞. Pulv. ipecac comp., grs. vj–ix
Bismuthi subnitrat., ʒj. M.
Ft. chartulæ, No. xij.

Dose.—One every two to four hours, according to the urgency of the symptoms.

In cases where for any reason a mixture is preferable, we may use—

℞. Bismuthi subnitrat., ʒij
Tincturæ opii camph., f. ʒiv
Syrupi simplicis,
Mucilag. acaciæ, āā f. ℥iss. M.

Dose.—Teaspoonful, as before.

It must not be forgotten that blackening of the stools will result from the use of bismuth, and this fact should be mentioned to the mother, as in some instances this condition has created great alarm, as portending a grave complication.

When acidity is a prominent symptom, we may employ with the bismuth the compound powder of chalk, with opium, in doses of one to three grains for a child of one year.

In all cases where opium is employed it is important to watch its effects, and where drowsiness or cerebral symptoms occur, it should at once be omitted. Should a child die comatose, it is difficult to dissuade its attendants from the belief that it has died from the effects of opium. It seems that the whole benefit obtained from the use of this drug is the so-called "putting the bowels in splints." It checks the peristaltic action, quiets the restlessness due to the pain, and thus allows nature to return to her proper condition.

In this connection, we must insist upon the great importance of *rest in the horizontal position*. This is constantly forgotten; the child is carried about over the shoulder of the attendant, jolted on the knee, or in a rough rocker, thus keeping the bowels in a perpetual turmoil. We see the good effects of rest by the almost invariable improvement after a good nap. Therefore, never disturb a child from its sleep, even though the hour for giving the medicine may be at hand.

In persistent cases we may give—

℞. Tr. catechu,
Tr. krameriæ,
Tr. kino, āā f. ʒij
Tr. opii camph., f. ʒiv
Spt. ammoniæ aromat., f. ʒij
Syrup. simp.,
Aq. cinnamomi, āā f. ℥iss. M.

Dose.—Dessertspoonful every two to four hours, according to age and urgency of symptoms.

Where, for any reason, the alcohol may be objectionable, we may employ astringent infusions of catechu in doses of one or more teaspoonfuls repeated as above.

When the discharges are quite offensive, the addition of a small quantity of the solution of chlorinated soda, two to five drops in each dose of the astringent mixture, will correct this trouble and aid in the cure. We prefer this to the use of carbolic acid, which rarely fails to prove so offensive to the child that it obstinately refuses to take the mixture.

An old formula, and one which we have seen to be of great service both in chronic and other

forms of diarrhœa, is the mixture of nitrous acid with opium and camphor water.

℞. Acidi nitrosi, ♏xxv
Tr. opii, ♏xv
Aq. camphoræ,
Syr. simp., āā f.℥iss. M.

Dose.—Teaspoonful every three to four hours.

In a number of instances this has given most excellent and speedy results. Where opium may be contraindicated, we may substitute extract of hyoscyamus, say half a grain in each dose.

We always prefer to give the above doses in two or three times the quantity of solution of acacia, or rice or barley water.

In cases of great restlessness employ the bromide of potassium or sodium, or chloral, or the bromide and chloral may be usefully combined, as mentioned previously. Rest is imperatively demanded for the cure of this condition.

When the skin is hot and dry, tepid sponging is of great value, and by itself often gives so much comfort that the little patient sinks into a refreshing slumber, perhaps the first it may have had for several days.

In cases where much flatulence is present, perhaps no remedies are more useful than chloroform and turpentine. The former may be employed in a formula like the following:—

℞. Chloroformi, gtt. xxx
Tr. opii camph.,
Tr. cardam comp., āā f.℥ij
Mucilag. acaciæ,
Syrupi simplicis,
Aq. menthæ viridis, āā f.℥j. M.

Dose.—Teaspoonful every hour, or even every half hour, or oftener, as occasion demands.

The turpentine may be given as follows:—

℞. Ol. terebinthinæ, f.℥j
Tr. opii camph.,
Tr. cardam. comp., āā f.℥ij
Magnesiæ calcinata, gr. x
Mucilag. acaciæ,
Syrupi simplicis, āā f.℥iss. M.

Dose.—Teaspoonful every two or three hours.

In all cases it is well to commence early with some tonic, and we have found the best and most useful to be the solution of the pernitrate of iron with calumbæ, as mentioned in the previous paper.

During the treatment the physician must constantly remember that the child requires food as well as medicine. Give milk, with a due proportion of lime water, with stimulants added as required, beef essence, beef or mutton tea, chicken, or rice water, also cold water freely. Nothing is gained by cruelly keeping the child suffering with thirst.

(*To be continued.*)

ANÆSTHESIA BY ETHYL BROMIDE (SUMMARY).

BY H. AUGUSTUS WILSON, M.D.,

Ophthalmic and Aural Surgeon to St. Mary's Hospital, and Surgeon in charge of the Surgical Out-patient Department; Lecturer upon Microscopic Anatomy and Fracture Dressings at the Philadelphia School of Anatomy.

I desire to present in this paper a summary of the facts known, up to this date, in regard to the anæsthetic use of the ethyl bromide.

During last winter I received a dissection wound, which required laying open; my confidence in the ethyl bromide was such that without the slightest hesitancy I consented to pass under its influence.

Dr. Levis poured one drachm upon a folded napkin, and I with my right hand applied it closely to my face. In one minute Dr. Levis asked if I was ready. I could barely understand what was said, but could not reply, and fearing that the knife would be applied, I managed to utter a groan. A second drachm was applied, and in half a minute more the incision was made, without cognizance on my part, and the napkin removed. One half minute more, or two minutes from the time of commencing to take the anæsthetic, I sat up, recognized and called by name a person who had entered the office during my unconscious moments. No nausea or other distressing symptom arose. My efforts at first were directed to watching the influence it would have upon me, but that influence was exerted so rapidly and stealthily, that ere I was aware of it I was in that happy condition which is such a boon to those about to undergo surgical procedures. Thus my apology is made, if apology is necessary, for presenting this subject again to the profession; my object being to incorporate, if possible, the views expressed in some of the recent articles upon the ethyl bromide and its uses.

The ethyl bromide, which was discovered by Serullas, in 1827, received but little attention until Nunneley, of Leeds, England, called the attention of the profession to it, in 1849. It was not long, however, before he was compelled to abandon it, because of its costliness. Rabuteau, of Paris, again evoked interest in the subject, in 1876, in connection with some experiments on animals.

In 1878 Dr. Laurence Turnbull,[3]* of Philadelphia, read a paper before the Pennsylvania State Medical Society, urging the advantages of this article[4] as an anæsthetic.

* The numbers in the text refer to corresponding numbers in Bibliographical Table.

The matter was looked upon passively until Dr. R. J. Levis, of Philadelphia,[5] took hold of the subject actively, in April, 1879, and gave it a trial during his term of service at the Pennsylvania Hospital, and later at the Jefferson College Hospital.

In January, 1880, he published his first article upon the subject. It was not known[6] until after the publication of this article that any experiments on man had previously been made abroad with this agent, and the cautious manner in which each administration was watched showed a desire to understand the *modus operandi* of its application.

That the ethyl bromide occupies its present high standpoint credit is due, first, to Dr. Turnbull, for reviving the attention of the profession to it; and secondly, to Dr Levis, who, with his large hospital opportunities and extended experience with anæsthetics, gave the drug a most careful investigation.

Thus, starting from Philadelphia, its application spread to all parts of this country, and recently word has come to us, through the journals, that it has been successfully introduced into Canada[37] and France.[33-34]

During the past few months a medical journal could hardly be found which did not allude to the ethyl bromide, showing conclusively that the profession, tired of the dangerous chloroform, inconvenienced with the slow, nauseating ether, was ready and anxious to accept an article which promised as much as this new candidate for popular favor. Having watched the growth of the use of this anæsthetic from the time it was first used in the Pennsylvania Hospital, frequently administering it for Dr. Levis, in private surgical practice, more frequently, perhaps, carefully noting the effects when administered by Dr. J. B. Roberts, I have continued to use it in preference to any other anæsthetic, at St. Mary's Hospital, in this city, and in my private practice.

ITS CHEMISTRY.

Heretofore ethyl bromide has been made by using potassic bromide, but as this was made from ferrous bromide, Dr. Lawrence Wolff,[15] a well-known pharmacist of this city, adopted the following method:—

In a stone jug containing about one gallon of water and two-and-a-half pounds of iron turnings, or wire, five pounds of bromine are gradually added, care being taken not to allow the temperature to rise too high, the jug, besides, being placed in cold or iced water; as soon as the reaction has ceased the solution of the green ferrous bromide is filtered off, the remaining iron being well washed out with warm or boiling water, and to it, in a leaden or glass flask, fifteen pounds of commercial sulphuric acid are added. After the mixture has sufficiently cooled six pints of alcohol (95 per cent.) are intermixed, the mixture well agitated and distilled at a temperature of 200°F., and there maintained until the reaction, which will go on quite lively for a while, shall have ceased, and the ethyl, which has rapidly been gathering in a receiver containing about one ounce of water, has ceased to come over, as can easily be detected when it fails to further sink to the under surface of the layer of water. The ethyl bromide so obtained should be shaken with a solution of potassic bicarbonate, subsequently washed with water and purified by re-distillation.

Dr. Wolff says that he has obtained in this way and from these amounts seven pounds of ethyl bromide, at a cost of material of not over $4.30, or about 60 cents per pound.

Thus, if ethyl bromide can be manufactured at this very low cost the objection that Nunneley found will not prevent the article from being used.

At the Pennsylvania Hospital[40] the first twenty-five administrations consumed nearly twelve fluid ounces, or about eighteen ounces avoirdupois. The retail price at that time was $3.00 per pound, thus making the total cost $3.37½. The average amount used in each case was $3\frac{9}{10}$ fluid drachms, costing 13½ cents for each patient.

The cost is governed by the manner of using. If in the bungling and wasteful manner so often seen in the use of other anæsthetic agents, I can readily understand how the cost would be a decided impediment to further use; but if administered as I shall detail later, any one can gain the same results as obtained above in similar cases.

ITS PHYSIOLOGY.

There exist such diametrically opposed opinions with reference to the physiology of this agent, that, instead of discussing them, I shall merely allude to the views held by different investigators and await the results of further experiments.

Dr. H. C. Wood, of Philadelphia,[14] deduces from his experiments on animals that anæsthesia may be obtained without reducing the blood pressure, but when given in excess it becomes a distinct depressant to the circulation, reducing the current of blood to a marked extent.

M. Terrillon, of Paris,[34] says that in no case has he observed any phenomena the nature of

which would cause fears of asphyxia; neither does the ethyl bromide seem to cause syncope.

Dr. Levis[8] observes that as anæsthesia progresses the general circulation shows evidences of moderate excitement, indicated by some increase in the rapidity of the action of the heart and increased arterial tension, the face becoming brightly flushed. Nor does he seem inclined to think there is any likelihood of cerebral anæmia or cardiac syncope; and he further observes, that all anæsthetics become eventually, by continuance, depressing agents.

Dr. W. H. Hingston, of Montreal,[37] notices in man an increased frequency in the heart action, together with an increased respiratory movement, and that the pulse and breathing are less influenced than with ether or chloroform.

Dr. Lawrence Wolff,[15] assisted by Dr. J. G. Lee, Physician to the Coroner of Philadelphia, experimented quite largely with rabbits, and observed that those animals which died, to whom respectively ethyl bromide and ether had been administered, presented similar phenomena.

The mode of death appears to have been by gradual paralysis of the cardiac inhibitory motor centres; while the sudden heart failure in the animal to whom was given chloroform, which is typical of chloroform accidents, seems to indicate paralysis of the cardiac motor centres.

Dr. Wolff believes that these experiments go far to show that a direct toxic influence from pure bromide of ethyl need not be apprehended.

Dr. Ott, of Easton, Pa.,[13] who has made thorough and scientific researches with the bromide of ethyl, experimenting upon frogs and rabbits, believes that the increased frequency of the heart is due to stimulation of the accelerative nerves, or of the cardio-motor ganglia, and the dangers in administering the drug are less than those of nitrous oxide.

MODE OF ADMINISTRATION.

It is of great importance that a preliminary drill should be gone through before commencing the administration of any anæsthetic, that the patient may know what is required of him and coöperate with the administrator. The assurance of freedom from suffering and danger go far to tranquillize the patient's mind and render him willing to observe such directions as it may be advisable to give him.

I cannot too greatly deprecate the careless manner with which anæsthetics are administered, it being an extremely rare occurrence for the patient to have his heart or lungs examined prior to the administration. A careful physical examination should be instituted in every case about to pass into the anæsthetic state, and should signs be present of affection of either of these organs, the administrator would feel increased responsibility, and would be more watchful for the slightest indication of trouble. But the frequent administration of anæsthetics at the present day, together with the rare occurrence of death, has tended to a disregard of danger.

The use of cumbersome mechanical apparatus for the administration of anæsthetics has no advantage over the simple napkin, as used by Dr. Levis.

It is recommended that a folded napkin large enough to cover the entire face be used, and upon the centre of this be pinned several folds of soft linen, about four inches square, upon which is poured, in measured quantities, the anæsthetic.

The patient being upon his back, with his head slightly raised, the preliminary drill having tranquillized him, the napkin is placed over the patient's nose and mouth, and a rapid, decided impression aimed at. The object is to obtain the anæsthetic state as soon as possible, without the intervention of muscular or mental excitement.

The anæsthetic state is usually indicated by a return to normal breathing, resembling that of ordinary sleep. When this condition is reached the application should be continued only as needed to keep the patient in this condition. It must be remembered that all anæsthetics become depressants when pushed to their toxic effect.

Vomiting is less frequent than in the administration of ether or chloroform—Terrillon, Féré, Hingston, Conner, Roberts, Turnbull, Levis—while Agnew, Haynes, Morton and Prince think that it occurs more frequently.

It seems impossible to reconcile these views, unless allowance is made for the impurity of the earlier samples, and the manner in which administration was conducted; for when given as Dr. Levis recommends, I am certain that vomiting is very much less frequent than when ether is given.

The condition of the patient's stomach is, of course, a very important matter, and it is well to have the patient abstain from solid food for at least four hours, and liquids three hours, before being anæsthetized (Levis).

Féré [33] recommends that a fast should be taken from the night before the operation. This may account, in part, at least, for his uniform good results in the administration.

The occurrence or threatening of vomiting

during the progress of anæsthesia indicates that the anæsthetic state has not been reached, and an effort should be made to push the ethyl bromide. It must be borne in mind that a fully anæsthetized patient never vomits.

After the completion of the operation, should nausea present itself, small pieces of ice may be ingested, with decided benefit. The patient should be kept in the recumbent position until all tendency to nausea has subsided.

The ethyl bromide is not available, in my experience, in operations about the nose and mouth, where it becomes necessary to suspend the administration for a time, for the rapid elimination allows the patient to return to consciousness, which is apt to be accompanied with more or less struggling.

After complete anæsthesia has been produced by ethyl bromide, I have found it practicable to continue the anæsthesia by the use of sulphuric ether, which has the advantage, and at times the disadvantage, of keeping up the anæsthetic state a considerable time after the napkin has been removed.

In operations lasting over one hour, it is probably safer to keep up the protracted impression with sulphuric ether; but I can conceive of but few operations which would require such a length of time in performing.

The quantity to be used in an operation must of necessity be governed by the condition of the patient and skill in the administration. In a recent case of scirrhus of the mammary gland, upon which Dr. Levis performed excision, I administered seven and one-half drachms of Wyeth's ethyl bromide, keeping the patient completely under its influence for forty-two minutes. Five minutes after removing the napkin the patient conversed rationally with those about her. In this case there was no nausea, vomiting, or other unpleasant symptom.

The largest amount I have personally known to have been given was eleven drachms during forty minutes, in a case of amputation of the arm, by Dr. Levis. I am unable to understand the necessity of giving the large quantities said to be required (?) in many of the cases where deleterious defects have been noticed or where anæsthesia could not be obtained.

In the case of Dr. Sims, of New York,[9] it is stated that two ounces had been administered during the first twenty minutes, at the end of which time she vomited freely (showing she was not thoroughly anæsthetized). The operation (Battey's) lasted one hour and a half, and about five ounces of the ethyl bromide were used.

It is, of course, a well known observation that those accustomed to alcoholic stimulants are with greater difficulty brought under the influence of anæsthetic agents, but this will not account for all the cases where "it became necessary to resort to ether or chloroform."

In reference to the only case of death occurring while under the influence of ethyl bromide,[39] that occurred at the Jefferson Hospital, on May.26th, 1880, I will briefly state that the patient was in a very debilitated condition, but after being in the hospital week after week, with the intention of improving his condition, and warm weather rapidly approaching, he protested against further delay. A consultation being held, an attempt to remove the vesical calculus was deemed advisable.

On May 26th, 1880, after the administration of a stimulant and fifteen grains of quinine, two fluid drachms of ethyl bromide were given by the resident surgeon. Soon after the patient struggled, when a third drachm was given. A fourth drachm was given later, and anæsthesia was accomplished. Dr. Levis made the incision, when a gentleman who has acquired a well-deserved reputation as an administrator of anæsthetics called attention to the imperfect respiration. The napkin being removed, the lips were noticed to be of a pinkish color, cyanosis apparently not existing.

Let it suffice to say, that nitrite of amyl, the battery, and artificial respiration were resorted to, and not until an hour had elapsed were the efforts suspended.

The post-mortem examination was held two hours after death, by Dr. J. G. Lee, Coroner's physician. Dr. Lee was peculiarly fitted to make the autopsy in this case, inasmuch as he had experimented quite largely with animals, in conjunction with Dr. Wolff.

He found the following conditions present:—

Commencing rigor mortis. In left perineal region an incision two inches long penetrating skin and superficial fascia. Tissues of scalp congested, membranes of brain congested, ventricles containing a small amount of clear serum, brain substance normal; membranes of medulla oblongata congested; substance of medulla anæmic. No odor of ethyl bromide perceptible. On opening body, some slight odor of ethyl bromide was noticeable. The apex of left lung was bound to thoracic walls anteriorly and posteriorly by old (circumscribed) pleuritic adhesions. Upper lobe was partially consolidated, the lung tissue containing a number of cavities, with caseous and purulent deposits.

Upper and lower lobes of right lung bound to thoracic walls anteriorly and posteriorly, by old pleuritic adhesions. Lung tissue consolidated and filled with cavities of various sizes. Trachea and bronchi contained a small amount of pus, otherwise normal.

Right side of heart dilated, auricle and ventricle containing post-mortem clots, concentric hypertrophy of left ventricle, which was contracted, and contained a very small post-mortem clot. Left kidney enlarged and diseased; right kidney enlarged. Liver normal. Intestines normal. Concentric hypertrophy of bladder, which contained at its neck two encysted calculi.

Dr. Morris Longstreth, pathologist to the hospital, made microscopic examinations, and reported as follows:—

Kidneys showed inflammation of pelvis, extending to entire organ. The morbid process in the lung was catarrhal pneumonia; no tubercular deposits were to be seen.

The coroner's jury rendered the verdict of death from exhaustion, due to disease of lung and kidney.

I think that the case teaches one very important lesson, that a careful physical examination should be instituted in every case, prior to administration of an anæsthetic. Had this been done in this case, I question very much if the operation would have been attempted.

SOME VIEWS AS TO THE VALUE OF ETHYL BROMIDE AS AN ANÆSTHETIC.

Dr. A. W. Adams, of Colorado,[16] says, from his small experience in its use, that in view of its patent virtues, *i. e.*, its rapid impression, the promptness of recovery from its influence, its agreeableness, and the non-combustible character of its vapor, it is worthy of a most extensive trial and investigation.

Dr. J. C. Reeve, of Dayton, Ohio,[12] remarks: "My personal experience with hydrobromic ether fully sustains the observations of others as to its exceeding promptness of action, and the rapidity with which recovery takes place. I can also say that it is pleasanter to inhale than chloroform, which is not very unpleasant, and infinitely pleasanter than ether."

Dr. Woodbury,[38] of Philadelphia. Editorial. "It is probably safer than chloroform, having much the same advantages over ether that chloroform has. But let it be understood that there is no such thing as a perfectly safe anæsthetic."

Dr. H. C. Wood.[14] "If any reader will examine the sudden fall of arterial pressure in Experiment 8, and remember the great expensiveness of the bromide, and the lack of any anæsthetic superiority on its part to chloroform, he will, I think, hesitate about endorsing this new agent."

Dr. Ott[24] draws the following conclusions:—

1. "Bromide of ethyl, by either inhalation or subcutaneous use, kills by a toxic action on the centre of respiration.

2. "That the decrease of force and frequency of the heart contribute to the paralysis of the respiratory centres.

3. "That injections of ethyl into the jugular toward the heart kill by cardiac arrest, probably due to an action on the cardiac muscle.

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5. "Bromide of ethyl in toxic doses depresses the actual tension steadily, due in major part to the depressant action of the drug upon the heart; and in minor part to a partial loss of tone of either the spinal vaso-motor centres, or the peripheral vaso-motor system.

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W. H. Hingston, Montreal, Canada,[37] has used no other anæsthetic since commencing the use of bromide of ethyl. There is less resistance and struggling on the part of the patient. Vomiting is less frequent. Eliminated from body more rapidly than any anæsthetic except laughing gas.

"That bromide of ethyl is one of the, and in some respects the, most valuable anæsthetic hitherto used."

Dr. Sims,[9] of New York. "The inference that I draw from the facts in the history of this case is that the anæsthetic was the cause of death, while the manner of death may have been by uræmic poisoning. The lesson from this is, never to give bromide of ethyl in prolonged operations, and never to give it where there is organic disease of the kidneys. What, then, shall we give?"

Dr. Levis.[5] "It is becoming evident that the dread of unavoidable disasters from chloroform and the inconvenience of ether are tending to prevent their humane administration in many

cases where the blessing of anæsthesia is due to the sufferer.

"While feeling inclined to impress caution in regard to the use of so powerful an agent as the bromide of ethyl, I am, from a basis of experience, inclined to recommend its use to the profession, and express my conviction that it is practically the best anæsthetic known to the profession."

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Dr. Roberts, of Philadelphia,[40] records a case of angina pectoris to which he was called that yielded quickly to the anæsthetic use of ethyl bromide.

The ethyl bromide has gained a place in obstetric practice, owing to its speedy action. In some recent cases where I have used it, it has given the greatest satisfaction. A single drachm administered at every premonition of a labor pain carried the otherwise suffering woman through it without complete loss of sensibility, and yet in a perfectly painless state, the process of labor apparently not being retarded.

In two cases of lumbago and one of sciatica I have administered the ethyl bromide hypodermically, in doses of ten and fifteen minims, gaining the same results that are obtained by similar applications of chloroform. The patients complained only of a sensation, first of warmth, later of numbness, for some considerable distance about the seat of puncture, which passed off in the course of a few hours. The pain in each case was very speedily relieved, and in the case of sciatica did not return after the third injection (one having been given on each day).

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Thus, it will be seen that the ethyl bromide has been used with success as a general anæsthetic in surgery, gynæcology, dentistry, in a case of angina pectoris, and other painful affections; as a local anæsthetic in numerous cases not recorded; by inflation in the treatment of tinnitus aurium; internally, for nervous headache; and hypodermically in lumbago and sciatica.

If a remedial agent possess such a large range of usefulness, and when administered judiciously has yielded such good results, while in its infancy, is it not proper that it should be given the benefit of a longer and more cautious trial, that its proper position may be assigned to it?

That it has been useful cannot be doubted. That it is capable of producing death should be no bar to its proper use, for, in such view, it would become necessary to strike from our materia medica a long list of remedies without which we would be at a sad loss.

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18 Editorial. *Clinical News*, May 15th, 1880.

19 *W———.*—"The New Anæsthetic Hydro-

Upper and lower lobes of right lung bound to thoracic walls anteriorly and posteriorly, by old pleuritic adhesions. Lung tissue consolidated and filled with cavities of various sizes. Trachea and bronchi contained a small amount of pus, otherwise normal.

Right side of heart dilated, auricle and ventricle containing post-mortem clots, concentric hypertrophy of left ventricle, which was contracted, and contained a very small post-mortem clot. Left kidney enlarged and diseased; right kidney enlarged. Liver normal. Intestines normal. Concentric hypertrophy of bladder, which contained at its neck two encysted calculi.

Dr. Morris Longstreth, pathologist to the hospital, made microscopic examinations, and reported as follows:—

Kidneys showed inflammation of pelvis, extending to entire organ. The morbid process in the lung was catarrhal pneumonia; no tubercular deposits were to be seen.

The coroner's jury rendered the verdict of death from exhaustion, due to disease of lung and kidney.

I think that the case teaches one very important lesson, that a careful physical examination should be instituted in every case, prior to administration of an anæsthetic. Had this been done in this case, I question very much if the operation would have been attempted.

SOME VIEWS AS TO THE VALUE OF ETHYL BROMIDE AS AN ANÆSTHETIC.

Dr. A. W. Adams, of Colorado,[16] says, from his small experience in its use, that in view of its patent virtues, *i. e.*, its rapid impression, the promptness of recovery from its influence, its agreeableness, and the non-combustible character of its vapor, it is worthy of a most extensive trial and investigation.

Dr. J. C. Reeve, of Dayton, Ohio,[12] remarks: "My personal experience with hydrobromic ether fully sustains the observations of others as to its exceeding promptness of action, and the rapidity with which recovery takes place. I can also say that it is pleasanter to inhale than chloroform, which is not very unpleasant, and infinitely pleasanter than ether."

Dr. Woodbury,[38] of Philadelphia. Editorial. "It is probably safer than chloroform, having much the same advantages over ether that chloroform has. But let it be understood that there is no such thing as a perfectly safe anæsthetic."

Dr. H. C. Wood.[14] "If any reader will examine the sudden fall of arterial pressure in Experiment 8, and remember the great expensiveness of the bromide, and the lack of any anæsthetic superiority on its part to chloroform, he will, I think, hesitate about endorsing this new agent."

Dr. Ott[24] draws the following conclusions:—

1. "Bromide of ethyl, by either inhalation or subcutaneous use, kills by a toxic action on the centre of respiration.

2. "That the decrease of force and frequency of the heart contribute to the paralysis of the respiratory centres.

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—A report of an epidemic of smallpox in Christiania, Norway, is contradicted. The only patients affected were unvaccinated children.

HOSPITAL REPORTS.

LOUISVILLE CITY HOSPITAL.

RECTAL CLINIC, BY J. M. MATTHEWS, M. D.,

Professor of Surgical Pathology and Diseases of the Rectum, Kentucky School of Medicine.

REPORTED BY A. H. KELCH, M.D.

Treatment of Hemorrhoids.

I imagine it will be better for the class, before presenting the patients, to say a few words concerning the affections, that you may understand the nature of the cases.

As I have often remarked, it is a fact that very few general practitioners diagnose these affections correctly, for the simple reason that they fail to examine the patient. It is a frequent occurrence for the surgeon to find, upon the presentation of a patient to him suffering with internal hemorrhoids, that an ulcer or other trouble has been diagnosed by the physician. Many times a serious condition is supposed to exist, whereas upon an examination a simple affection, easily relieved, is found.

I have not talked to you at all upon the subject of piles, and I propose to do so this afternoon; and in order to make my remarks impressive I shall bring some cases before you; but before they arrive I wish to speak of the diagnosis, the prognosis, and the treatment of external hemorrhoids.

From time immemorial piles have been classified as external and internal, and while that is the true classification, you may have, of course, some internal piles that are partly external, and per contra, some external that are partly internal. But at the same time, when you come to make the distinction, all you have to do is to return the protruding part, and if it goes beyond the sphincter you can safely say it is an internal pile. The difference, however, between the internal and external is very great; and yet you will meet with many cases of external piles that have been diagnosed as internal, and very often with cases in which no distinction has been made. It has simply been stated to the patient he has piles, leaving him to infer either internal or external; yet the treatment must be radically different.

Many causes are recognized as efficient in producing external hemorrhoids; thus, you may say that diarrhœa, constipation, dysentery, over-indulgence of the sexual appetite, too high living, sitting upon a cold seat, intemperance, may all cause this development.

External piles can be divided into two classes, and one division ought to be called simply "tabs of skin." The other is a little venous tumor. It is the bursting, likely, of a small vessel, and the blood has run into the tissues and coagulated. Now, whether it be true that this coagulation is simply in the tissues or in the vein itself is a matter of little importance, because the treatment is the same in either case.

Having met with this order of piles in its simple, uninflamed condition, you would naturally suppose that they do not amount to much, and you will be led into the error of prescribing some simple application and sending the patient

home. But if you see it when it is inflamed, and has grown to be as large as a walnut, likely (and everything coming in contact with it causing the patient pain), you will then see they can be a source of much annoyance; and if you meet with them in this inflamed condition, the question at once arises, How are you going to treat them? Remember, I say in this *inflamed* condition; because you are not called upon to treat a simple little tab of skin; but it is when they become inflamed, and engorged, and angry looking. The only question then can be, Must you operate upon it when it is inflamed? Surgeons, of course, take the position, and very correctly so in the majority of cases, that no portion of the human economy ought to be cut or operated upon when inflamed. Is that true in reference to this affection? I think not; though, before you would resort to the operation you can make some application to it, if you prefer, to quiet the irritability, and the best thing you can do is to bathe them with cold water. You will find this, gentlemen, always one of the best applications, in these cases, to relieve the irritation. Suppose that is not sufficient, however; then what is the best application in addition to this? If you are consulted at your office, my advice to you is to simply apply belladonna and extract of opium, in equal parts, with the direction to the patient to apply it again the next day, after a thorough ablution in cold water. If they will follow these directions and repeat the same for two or three days, this inflammation will have disappeared from this external tab of skin.

Then you have relieved this suffering for the time being; but have you cured the pile? No. This tab of skin is there, or this venous tumor has just been reduced to the size it was before the inflammation.

Now what are you to do? Well, gentlemen, I am glad to say, that the treatment of external hemorrhoids is very simple and very effectual. If it consists of a tab of skin, clip it off with a pair of curved scissors. You will find a great many patients who will object to the knife, but you can assure them there is no other hope for a cure.

After this operation, all that is necessary is to apply some persulphate of iron; if there is much hemorrhage, dress it with a T-bandage, and let your patient go home. The only question that could come up, then, would be, Should you allow them to take exercise? You will find they will go about their business, as usual. If the hemorrhoid consists of a little coagulated-blood tumor, then I think it is advisable to either cut off this, as you would a tab of skin, or, with a bistoury, cut into it and evacuate the blood. If this has existed for a long time, or if there are any flaps of skin that can fall into this cut, with a pair of scissors cut them off.

This constitutes the treatment, and the only sensible treatment, for external hemorrhoids.

Case 1.—Now, I have told you that external hemorrhoids are liable to become inflamed. I will add, they are also liable to become ulcerated. You will find that as they exist they are liable to be rubbed by the clothing, or possibly there is a discharge from the bowel that, coming in contact with the tab of skin, will inflame it, and therefore there is considerable pain, not only in defecation, but also in walking or any other exercise.

This man says he had an attack of piles about ten years ago. Those were probably internal piles, which, ascending above the sphincter, never troubled him again, or one of these tabs of skin that has never since been inflamed. To-day he has them, not only inflamed, but ulcerated. When this inflammation has subsided they will be only about one-fifth their present size. Here, at another point, is one of these tabs of skin uninflamed. If it should become so, it would be much larger than this which is now inflamed. Here, bordering upon the perineum, is some superfluous skin that may become inflamed and give rise to the same amount of distress.

Now let us apply the treatment to this case. But first let me urge you never to be satisfied with the diagnosis of only one class of trouble, because if you do you may be guilty of operating upon external hemorrhoids when there exist at the same time internal. Besides, in a case like this you may have fissure, or a narrow fistula, or an ulceration, or a stricture of the rectum; therefore we will proceed, by the introduction of a finger, to determine if anything else exists, more than is apparent externally. * * * These are simply external hemorrhoids. We will apply the belladonna and opium here for a day or two, and then the only sensible thing remaining to be done is to operate, and that operation consists in cutting them all off, because if you leave any they may become inflamed and give us much trouble again.

Now, here is one that is ulcerated. If you rely upon local applications to cure this, it would require three or four weeks to accomplish that result, while if you operate upon it at once you see the ulceration, being confined to the pile, is removed and the man is relieved of his hemorrhoid and the ulceration both at the same time. It is remarkable how readily these wounds heal. If you apply the persulphate of iron and put on a T-bandage he will be well in three or four days, and will suffer no relapse. It is not necessary even to confine his bowels, as we do in most cases of operations upon hemorrhoids, by some form of opium. It will be sufficient for him simply to bathe the parts and keep them clean, and this, gentlemen, constitutes a radical cure for hemorrhoids of this character.

I would not have you waste your time with these patients, applying ointment for weeks, when you can do this operation at your office and send your patient home not only relieved but absolutely cured.

Fistulæ.

Case 2.—This is the case of fistula that was operated upon by Dr. Ritter (Interne) three weeks ago. It has not healed as readily as it should. You all remember this was a large cut, involving the laying open of three fistulous tracts. There are several reasons why a wound of this character does not heal as kindly as you wish sometimes. In the first place it was a large cut; in the second, it is a difficult matter to keep a patient of this kind in bed, inasmuch as they do not suffer much pain after the operation; and if you will

but reflect a minute, you will see that unless you do, these parts are dependent, and the circulation bad; and beyond this you frequently find a diathesis that prevents the healing process. Such cases must be placed upon constitutional treatment, and unless you take that precaution you will, in this class of patients, frequently fail in your treatment. This, however, is now healing very nicely, and in a few days she will be entirely well.

In the healing of fistulous cuts, gentlemen, it is of prime importance for you to remember what I said about granulations. These wounds must heal from the bottom. You will find a tendency on their part to heal at the sides, and that must be prevented. Every day, as they are healing, pass your finger to the bottom of them, and break down the adhesions at the sides, thus compelling them to heal from the bottom.

There is another thing I would have you remember in the treatment of rectal affections in women. If you find, for instance, that a woman has a fistula, and desires it cured, you ought at the same time to examine the uterus, and if you find any retroversion or anteversion, you should refuse to operate. This is the rule, though I have violated it several times with success. But I think it is better to first refer her to the gynæcologist for treatment. The question will arise sometimes, shall you operate upon a woman who is pregnant? There are a certain class of rectal affections that will call for immediate operation. Suppose you have a capillary pile from which there is oozing constantly arterial blood. I have seen women so blanched and reduced that they could hardly walk across my office floor, from this loss of blood, and under these circumstances I would not hesitate to operate. True, it might cause an abortion in some cases, but if you take the precaution to confine your patients to bed there is not much danger.

These are questions that will come up in your practice, and it is well enough to refer to them now. I prefer to mention these points to-day rather than to enter upon the treatment proper of fistulæ which I will discuss in future clinics.

Pruritus Ani.

Case 3.—It is clearly to be seen that this woman has pruritus ani. We will see if there is any other trouble. * * * * * There is not.

As I told you the other day, when I presented a woman to the class suffering from this trouble, there is no class of rectal affections that causes so much distress as this particular thing. The distress comes, of course, in these instances, from the itching and scratching. The cause of it may be traced to many things. A slight inflammation here may be caused by the passage of hard fecal accumulations. The stretching of the sphincter ani is sufficient to cause this inflamed condition. It may arise from an ulcer within the rectum, the discharge from which coming in contact with the skin will cause irritation. It may arise, in adults as well as in children, from thread-worms, "oxyuris vermicularis;" it may be herpetic or eczematous, and come from a filthy condition of the parts.

In this case it is evidently of long standing. The skin around the anus, here, is hard, indurated, scabby, and directly it will peel off, leaving the part red and irritated. I prescribed an ointment of vaseline and calomel, with frequent applications of "yellow wash," and under this treatment the patient is getting better. Now it behooves us to be able to treat and cure this condition, but do not be surprised when I tell you that this affection, simple as it may seem, will resist for years all medication that you can use. And if you meet with these cases and prescribe for them, and fail to relieve them in a few weeks, they will seek some other aid.

This is a local affection, but if you find it resists all local applications, it will be necessary to place the individual on constitutional remedies, and one of the best is Fowler's solution, kept up until you get its effects, as manifested in the swelling of the eyelids, etc. Then stop it for a week, and commence again, at the same time using local applications, one of the best of which would be—

℞.	Iodoform,	gr. x	
	Acid carbol.,	gr. v	
	Vaseline,	℥j.	M.

Sig.—Apply ter die.

Another good application is hydrarg. mitis, gr. xx, vaseline, ℥j, made into an ointment and applied once or twice a day. Another is carbolized oil, applied in sufficient strength, say half a drachm to an ounce of glycerine or sweet oil, and if these do not give relief the application of sulphurous acid diluted in water and applied with a brush three or four times a day. This may be tried, if the trouble arise from parasitic causes, and while you are treating these patients locally and constitutionally you will have to keep the motions from the bowels soluble, and for that purpose I would use castor oil every day while under treatment. If they complain of this, you will find cascara sagrado, fluid ext., an excellent remedy. I can safely say I have met with no remedy so uniformly successful in relieving habitual constipation as this one. It does not act as a purgative at all, and sometimes you will have to give it for several days, a week or two, before you get its effects, but you will find it efficient in relieving some of the most obstinate cases of constipation. To relieve the terrible itching of which the patient complains, nothing is better than chloroform ointment (℥j to ℥j) applied at night.

Rectal Fissure.

Case 4.—Here is a woman who has had a rectal trouble, she says, for four months. She now has specific trouble, and is under treatment for the same. She says she has pain whenever she has an action of the bowels, and that this pain lasts about half an hour. She has no pain before she goes to stool. She has a discharge from the rectum, of blood and mucus. She has nothing to descend out of the bowel.

Whenever you get such a history and symptoms as these you can safely diagnose fissure of the rectum. These are its characteristics, viz: She tells you that between the times that she goes to stool she suffers no pain, but she has pain during and following a passage. Do not, however, be satisfied with saying there is fissure, but

examine the case thoroughly, and whenever you find a patient with a syphilitic history, having a rectal trouble, look for ulceration, and if you find it place the patient at once upon anti-syphilitic treatment. Don't understand me as saying that all ulcerations found in the syphilitic patient are due to syphilis; but I do intend to say that the majority of such are. It is a question yet mooted, whether this ulceration found in the rectum, and due to syphilis, is a local manifestation of the constitutional trouble or has occurred by an extension of chancrous pus. The first of these I believe to be correct, and will take another time to give you my reasons for the belief.

You see this fissure is located just at the margin of the sphincter muscle. There is ulceration extending over this fissure, it does not surround the bowel entirely, and this is what gives rise to the discharge the patient complains of. Now, the treatment for this, to relieve the pain, is to do just one thing only. It would be useless to waste your time in giving this woman ointments or any local applications for this purpose. Cases the result of a specific cause, especially resist local applications, so in this case I will dilate the sphincter and placing the fissure-knife above the margin of the fissure I will draw it through the tissues and include, if necessary, the external sphincter muscle, and bring it out half an inch beyond the external border of the fissure. If you will make this incision the pain she speaks of will be well in an hour. I have seen patients who have suffered from this condition relieved in five minutes, of all pain, by the simple drawing of the knife through the tissues. After it is divided it is a good plan to make a local application to the remaining ulceration, and for this purpose iodoform, twenty grains to the ounce of vaseline, answers excellently well, and in connection with this I would syringe out the bowel with carbolized water once or twice a day. That will keep it clean and enable it to heal faster. This local treatment, in conjunction with the constitutional medication, must be kept up until you can pronounce the ulceration cured.

Ulceration of the Bowel.

Case 5.—Here is another case of specific trouble. This woman complains of the same kind of pain as did the last patient, but says it lasts only about fifteen minutes after defecation. She also has a discharge, but of blood and mucus mixed. The other said she had a discharge of pure blood sometimes, and you saw the cause—stretching of the sphincter muscle, drawing apart the fissured surface.

Externally, here, you find a bad condition of affairs. Fistulous tracts and ulceration, which extend very far above the sphincter. Knowing the history to be specific, we at once conclude that it is specific ulceration of the bowel.

Upon the introduction of the finger into the bowel, we find—what is the result of inflammatory action—the tissues are indurated and the part is denuded of its mucous membrane for several inches up. I also find a strictured surface. You see the great amount of pus that is now issuing from the anus. The examination causes the patient such pain, that I will desist and take occasion to put her under the influence of an anæsthetic and make a thorough examination. My time having now expired, that must be postponed until our next clinic.

Editorial Department.

Periscope.

The Therapeutic Uses of Hyoscyamine.

At a recent meeting of the Cambridge Medical Society, reported in the *Lancet*, July 10th, 1880, Dr. Bacon gave an account of the preparation known as "Hyoscyamine," and of its therapeutic uses. There are two preparations sold under that name, both made in Germany. One is Merk's "Extract of Hyoscyamine," and the other is a crystallized preparation in the form of a whitish powder and of variable strength. His experience has been limited as to Merk's extract. It is most conveniently administered dissolved in alcohol, one grain to the drachm. The solution mixes badly with water, a resin forming on the sides of the bottle. The preparation deteriorates by keeping; if it become greenish in color, it is a sign that its strength is lessened and that its action may not be relied on. It is called by the manufacturer the "extractive amorphous alkaloid" of hyoscyamus, and is very costly. With this preparation he has found the effects much more potent, and more certain and reliable than those of ordinary henbane. Its action is that of a powerful sedative and hypnotic, and it is the only sedative and hypnotic in his experience whose action may be certainly relied on. Doses as large as two or three grains of (Merk's extract) have been administered; he had himself never given more than a grain and a quarter, and his usual prescription was three-quarters or one-half a grain. If three-quarters of a grain be given to a maniacal patient in a state of excitement, he will be reduced in half an hour to absolute helplessness, and will be probably asleep or comatose. The lips become red, the face dusky, and the saliva flows from the mouth; the pulse is quickened and there is dilatation of the pupil, lasting for twenty-four hours; the other symptoms pass off in about twelve hours. Vomiting had occurred in two or three of his cases. The drug is especially valuable in treating the maniacal condition (chronic or acute). It had been used in delirium tremens, and its power of inducing quietude and sleep to a certainty indicated its value in that condition. In some cases the beneficial results flowing indirectly from its use had been so great that he had been

able, after a time, to dispense with the drug. Two cases had occurred in his practice which would serve to show where caution was necessary. In the one (a private patient) only half the dose prescribed was given, and the patient, instead of being sent to sleep, was put into a state of excitement and delirium. In the other an accident, fortunately not fatal, followed the administration of the drug. The patient had become profoundly insensible, and had vomited, and part of the vomit (consisting mostly of partly digested bread) appeared to have got into the air passages, giving rise to corresponding symptoms.

Belladonna Poisoning Treated by Chloral.

Dr. Trocquart reports the following case in the *Journal de Médecine*, of Bordeaux:—

M. T., aged twenty-five, of a strong constitution, had suffered for some days with singing in the ears, for which somebody had recommended him to take belladonna. Patient, who was a dealer in pharmaceutical products and medicinal plants, took a pinch of belladonna leaves, which he infused in a small quantity of boiling water and administered to himself. About half an hour later he was seized with severe pain in the stomach, excitement and vertigo. He took some tartar emetic, which made him sick. I saw the patient three hours after he had taken the belladonna. He was in a state of violent delirium. Four people could with difficulty keep him in bed. He uttered piercing cries, and did not recognize any of his family. The face was red, animated, covered with sweat; the eyes haggard, pupils dilated; the entire body convulsed by disorderly movements. These attacks of furious delirium lasted four or five minutes, then the patient fell for some minutes into a state of complete prostration, which was soon succeeded by a fresh access of delirium. I recommended the patient to be closely watched, and his limbs restrained, so that he should not wound himself by throwing himself out of bed. I also ordered a draught of four grams of chloral.

When I saw him again, some hours later, I found it had been impossible to get him to open his mouth to take the draught; indeed, he had spat out a few drops which had been put between his lips during a calm moment. I then got them to give him an enema containing five grams of chloral. Calm soon succeeded to the violent attacks which I have mentioned; the patient fell into a sound sleep. As soon as agitation appeared we made him take a spoonful of the chloral draught. The night passed without accident, and the patient awoke in the morning suffering only from great muscular fatigue.

A "Credé" Method Among the Kiowa Indians—A Contribution to Obstetric Literature.

G. A. Moses, M.D., of St. Louis, states, in the St. Louis *Courier of Medicine and Collateral Science*, for July, 1880, that Dr. L. L. McCabe, Surgeon to an Indian Agency, related to him the following interesting fact in aboriginal obstetrics:—

An Indian woman, of the Kiowa tribe, one of the wildest tribes, which has come scarcely at all in contact with the whites, had been in labor for three days, and it being apparent to the friends and midwife squaw that successful natural delivery was impossible, and that under the native treatment by incantations, beating of tom toms, etc., the woman's strength was becoming rapidly exhausted, assistance of the Post medical officer was desired. It was only after several visits to the wigwam that the doctor finally was allowed to make a very hasty and imperfect digital touch. The head was arrested in the cavity. After still further delay he was permitted to apply the forceps, which, to the intense amazement of the lookers-on, drew forth a living infant. As soon as this was effected, the physician was rudely pushed aside, and the Indian midwife took charge of her case, compelling the woman to rise to her feet. She was sustained in a bent posture, grasping with both hands the centre-pole of the tent; then the squaw proceeded to carry out, methodically, Credé's method of expressing the placenta, by compressing the uterus through the abdominal walls, with both hands pressing in the direction of the pelvic cavity, until the placenta appeared at the vulva, when it was seized with one hand and withdrawn; the patient was then allowed to resume recumbency, and a highly ornamented buckskin bandage was adapted to pelvis and abdomen; this was drawn snugly by buckles and straps. The doctor says it looked as though it had been in use some time, and was a most perfect fitting bandage. The patient made a good recovery, and the white man's "iron hooks" are established in reputation among the band.

If the Indian mother gives birth to twins, only one is allowed to live. In case of the birth being male and female, the latter is delivered to an old squaw, and nothing further is heard of the luckless papoose. In case of both children being of the same sex, the feeblest is put out of the way.

Coca.

Concerning this remedy, which has lately been prominently before the profession, Dr. D. H. M'Donald, of Quincy, Ind., writes to the Louisville *Medical News*, July 17th, 1880:—

There can be no question of the potency of coca, and in the hands of the intelligent physician much good may be expected from its use. But do take your trenchant pen and give us a slashing article against the indiscriminate use of it. You know a confirmed chewer of coca is called a coquero. Among the Spanish Americans a coquero is considered hopelessly lost, with no prospect of reformation. Look at the picture drawn by Von Tschudi: "The inveterate coquero is known at first glance. His unsteady gait, his yellow skin, his dim and sunken eyes encircled by a purple ring, his quivering lips, and his general apathy, all bear evidence of the baneful effects of the coca juice, when taken in excess."

Surely this picture is enough to startle any one; but I know that some cannot be startled if there is a prospect of satisfying an appetite; therefore the need of a warning in time, to the profession as well as the masses, against the indiscriminate use of a drug which is apt to be followed by the blasted life of the coquero.

Examination of the Œsophagus, Under Chloroform.

The following is an abstract of a contribution by Dr. Girard, of Berne, to the *Centralblatt für Chirurgie*, No. 21, 1880: Under certain conditions, it is found necessary to give chloroform in order that a bougie may be passed readily down the œsophagus. In the administration of this anæsthetic, the usual sitting and the half-recumbent positions are inconvenient, and in the former position chloroform is dangerous, and the passing of a bougie during anæsthesia may be attended with much difficulty. This difficulty may be overcome by placing the patient on an operating table with the body lying horizontally and the head projecting beyond the table's edge, where it should be supported by an assistant, in order that the cervical vertebræ may not be bent too much over the edge, and made so prominent as to prevent the introduction of the œsophageal bougie. The surgeon stands on the left side of the patient, and is now able to introduce the sound under the following favorable conditions. 1. The mouth is either found open, or can be opened without any difficulty. 2. The trunk, neck and head can be very readily fixed in the desirable position. 3. The buccal cavity, the pharynx, and the œsophagus are in a straight, or nearly straight, line, and a straight instrument, if not too thick, can be easily passed. The surgeon, holding the bougie in the supinated hand, passes it in a horizontal direction, with a movement like to that of the first step of urethral catheterism. The supination of the surgeon's hand, and the horizontal movement, allow a freer, readier, and more delicate introduction of the bougie than does the movement in a vertical direction, and so favors a close exploration of any obstruction or stricture. Dr. Girard reports that he has practiced this method in two cases with very satisfactory results. In one of these he had to deal with a carcinomatous stricture of the œsophagus, the coats of which were so sensitive that it was difficult to pass a bougie, save under chloroform. On the administration of this anæsthetic to the patient in the above described position, bougies of large size could be passed readily and precisely through the constricted portion of the canal. The second case was one of foreign body in the œsophagus. In conclusion Dr. Girard suggests that it may be possible to apply his method to the introduction into the œsophagus of instruments permitting an endoscopic examination.

Reviews and Book Notices.

NOTES ON CURRENT MEDICAL LITERATURE.

——Prof. C. J. Lundy, of Detroit, sends us, in a reprint from the *Michigan Medical News*, June 10th, 1880, a clinical lecture on "Diabetic Cataract, Iritis, etc.," and also a pamphlet on "Sympathetic Affections of the Eye," reprinted from *Leonard's Illustrated Medical Journal.*

——The first number of the *International Surgical Record*, a weekly journal, devoted entirely to Surgery, is before us. It is edited by A. Ghilles Rose, M. D., who informs us that, besides articles from American authors, complete translations from foreign medical literature will also be published. The office of the journal is No. 1 Chambers street, N. Y. Subscription Five Dollars per annum.

——*The Atlantic Monthly* for August continues the "Stillwater Tragedy," by Thomas Bailey Aldrich; "Sicilian Hospitality" is depicted by Luigi Monti; Susan Coolidge contributes a poem, entitled, "Kintu;" "The Surgeon at the Field Hospital" brings to us memories of the late war; among other articles are: "Mr. Hunt's Teaching," by F. D. Willet; "Pepacton;" A Summer Voyage, by John Burroughs; "The Archbishop and Gil Blas," by Oliver Wendell Holmes; "Sylvia's Suitors," by Louise Stockton; "Among the Pueblos," by Susan A. Wallace; "Edward Mills and George Benton," by Mark Twain; "The Preceptor of Moses," by Francis H. Underwood; and several others of considerable interest.

BOOK NOTICES.

An Experimental Research on the Physiological Actions of Drugs on the Secretion of Bile. By William Rutherford, M.D., F.R.S., Professor of the Institutes of Medicine in the University of Edinburgh. With one hundred wood cuts. Edinburgh, Adam and Charles Black, 1880. Cloth, 8vo, pp. 173. Price $3.00.

This little work is the product of a series of carefully performed experiments, made for the purpose of ascertaining to what extent, if any, the various drugs which are administered for their cholagogue action actually influence the production of bile. These experiments were performed on dogs, that animal being selected because the size of its common bile-duct renders it possible to introduce a canula with an orifice sufficiently large to prevent its being blocked up by particles of inspissated mucus from the gall-bladder, and also for the reason that its digestion resembles that of man, inasmuch as its stomach is empty when the process is completed. More than fifty drugs were experimented with, and their effect on the bile-secreting function carefully noted. The results of these experiments, which are of incalculable value to medical science, were first published in the *Journal of Anatomy and Physiology*, and in the "*Transactions* of the Royal Society of Edinburgh," from which this book is reprinted.

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THE LEGALITY OF SANITARY MEASURES.

The love of liberty is so thoroughly taught to the citizens of this country, that it is a matter of serious doubt with many of them whether the care of the health of individuals properly forms a part of the functions of a government.

In times of epidemics, and in the face of contagious diseases this question becomes a vital one; and at all times the prevision and forethought necessary to protect the community are of little avail, unless supported by the strong arm of public authority. There are not a few diseases the reduction and prevention of which demand constant attention, to be successful. We may mention smallpox, yellow fever, syphilis, and leprosy, where they prevail, as examples. Compulsory vaccination and the enforced registration of prostitutes and examination of seamen are mooted questions, not on sanitary, but on politico-economical grounds. Is it consistent with a free government to enforce such measures? Does it not transcend the limits of legislative authority to pass such enactments?

If we examine this objection in the light of the most recent authorities we may reach a correct opinion. If we are governed merely by prejudice or ignorance, we may not.

President Woolsey, in his recent treatise on *Political Science* (vol. II, p. 398), defines the office of sanitary regulations to be to "prevent the introduction and spread of disease." He adds: "Here a very wide field is open, which can be properly taken care of by no association of medical men or philanthropists, but needs that public authority should be vested in some board or commission." In the accomplishment of these objects DR. WOOLSEY, recognizes that at times, as for instance in the control of the construction of tenement houses, there may be some decided interferences with an individual's employment of capital, or, as in quarantine, with his personal liberty. Yet he decidedly considers that it is the duty of the State to take such measures.

This opinion of the most eminent American writer on the principles of law coincides entirely with the verdict of the civilized nations of history. The sanitary regulations of the ancient Israelites, as preserved to us in the books of Moses, are marvelously minute and severe. In imperial Rome, a special branch of medical officers, the *archiatri populares*, were appointed to protect the public health, and clothed with ample authority for that purpose. In later centuries the barbarism of the Middle Ages, and at present a misunderstood theory of free government, have offered considerable opposition to the enforcement of general sanitary regulations. In the United States this narrow view has even found defenders among the regular profession. Witness the opposition which the organization of the National Board of Health encountered. It was alleged that its powers interfered with "State rights:" that the principles of our Government were endangered; that there was in this Board a seed of centralized power, etc.

So also the regulations attempted to be enforced against the spread of syphilis met opposition, not only from priests and women—classes

which, as Thackeray remarks, are always sure to ruin a country when they get control of its politics—but from some medical men of middling good position.

But, as respectable medical men are also found who have embraced homœopathy, favored phrenology, and even opposed vaccination, one can only explain such a phenomenon by believing that a medical man may be respectable and still have such a soft spot in his brain that he cannot tell sense from nonsense on the subjects which he has most studied. Fortunately, the number of such weak brethren is limited, and the probability is that it will become still more so as the general intelligence on these matters clears up, and the necessity for action becomes more apparent.

Notes and Comments.

Therapeutical Notes.

TREATMENT OF PERTUSSIS.

Dr. E. J. Beal, of Fort Worth, Texas, states, in the St. Louis *Clinical Record* for July, 1880, that he has successfully employed the following treatment in numerous cases:—

Three or four thicknesses of white flannel, four by four inches, are quilted together and suspended by tape around the neck of the little sufferer, like a necklace. The pad so formed is to be saturated three or four times daily with the following mixture, and to be worn night and day. When the child sleeps, the pad to be placed in close proximity to the respiratory outlets:—

R.	Ol. sassafras,	ʒ iij
	Ol. terebinth,	ʒ iv
	Fl. ext. belladonnæ,	ʒ ss
	Phenol sodique,	ʒ iv.

If it is apprehended that the little sufferer will place the pad in the mouth, it would be well to be guarded in not exceeding the amount of belladonna suggested.

Epilepsy and Crime.

In *Brain*, quoted by London *Medical Record*, Dr. Clarke has published some very suggestive tables of statistics. He finds it hard to avoid the conclusion that alcoholism in the parents is a predisposing cause of crime and epilepsy. Forty-four per cent. of epileptic criminals were the children of drunken parents. With regard to the parents he finds that epilepsy is more frequent in the mother than in the father, and that the percentage for both parents is higher with the women than it is with the men. In drunkenness the reverse holds good. The proportion of epileptic and insane relatives is found to be very much greater with criminals than with ordinary epileptics. It has been asserted by Taquet that "sexual desires show themselves early in the children of drunkards, and are associated with absence of moral sense." The author finds that the convictions for bastardy are three times as numerous among epileptics as among non-epileptics—a fact which strongly bears out his idea that epilepsy owes its origin to hereditary alcoholism. Other tables show that the amount of crime as indicated by the number of convictions is greater among epileptics than among ordinary criminals.

The Treatment of Granulations in the Pharynx and Larynx by Ignipuncture.

Dr. Krishaber, in *Annales des Maladies de l'Oreille, du Larynx, etc.*, May 1880, gives a description of glandular pharyngo-laryngitis—its causes, pathology, symptoms, diagnosis, and finally its treatment. The part of the larynx most commonly affected is the mucous membrane of the arytenoid cartilages. The author has, however, seen distinct granulations on the vocal cords without any concomitant implication of the remainder of the larynx, or of the pharyngeal mucous membrane. The granulations produced by hypertrophied glands may, if isolated, pass unnoticed during life, unless a very powerful illumination be employed. This, according to the author, explains how it is that some observers deny the presence of granulations in the larynx. They are almost always of larger size in the pharynx. When the granulations in the larynx attain to a considerable size, they form true polypi, having the structure of adenoma. For destruction of the granulations, the author prefers the application of ignipuncture. When the granulations are situate in the pharynx, he uses for the purpose Paquelin's thermo-cautery, and when in the larynx the galvano-cautery. (The latter may, however, be used for both forms.) Three cases are cited, in which granulations in the larynx were treated by this method. In the first case, there were two large granulations in the anterior angle of the right vocal cord, one of which was removed by a single application of the cautery, the voice becoming perfectly clear. In the second case, both pharyngeal and laryngeal granulations were cauterized, with great improvement to the voice. In the third case, two large granulations, which

produced no inconvenience, were accidentally discovered on the free margin of the epiglottis, and removed by a single application of the galvano-cautery. A fourth case is also described, of a lady, suffering from pharyngo-larypgeal granulations, accompanied by a feeling of a foreign body in the throat, and a dry cough. Under treatment by ignipuncture, complete recovery ensued. The author considers that the danger in this method of treatment is much less than it seems; the normal laryngeal mucous membrane presenting a much greater resistance to cauterization than the morbid growths. The efficacy of this method is infinitely superior to that of other caustics. Of pharyngeal granulations treated by ignipuncture, the author has had more than forty cases. The number of applications required in these cases varies from five to twelve. In conclusion, the author states that this treatment of glandular pharyngo-laryngitis is almost painless, and is followed by no inconvenience, a result being very promptly obtained. It is easily applied, and, except in some rare cases, requires no special skill in its employment.

Ante-Mortem Rigor Mortis.

Mr. Alfred Finch, M.R.C.S., reports, in *The Lancet*, a case of a woman, sixty-five years of age, who had abstained from the use of all food for two weeks, while suffering from mental distress. In dressing one morning she observed a numbness of the legs, and on attempting to come down stairs all power of motion was lost. Examination showed entire absence of voluntary and reflex motion as well as sensation below a clearly defined line at Poupart's ligament, where also was a well marked difference in temperature, the surface above being warm and below cold and livid. There was also perfect muscular rigidity. Within two hours after death, which occured fourteen hours after the development of the symptoms just related, all muscular rigidity had disappeared.

Epileptic Amaurosis.

Dr. Christensen relates, in the *Ugeskrift for Läger*, second series, Band 27, the case of a married lady, aged thirty-three, of healthy family, who, since her first menstruation, in her twelfth year, had had attacks of loss of consciousness, sometimes with convulsions, followed by blindness of several hours' duration. These attacks occurred at each menstrual period, and ceased with the appearance of the catamenia. From her eighteenth year the convulsions became more severe, but the sensory impairment grew more rare and weaker. In December, 1872, the convulsions and catamenia did not occur; but after several days' headache and giddiness, she became blind in the course of an hour. The fundus of the eye was normal. Under the use of leeches and counter-irritants the headache ceased. Some days afterward she had an epileptic attack, in which there was considerable hyperæmia of the optic disc and retina. She menstruated in January, and her sight began to return. After some months her vision was $=\frac{1}{2}$, with blindness to red; the disc was somewhat atrophied. Four years later she had a similar attack of blindness, but not complete. Vision returned after the appearance of the menses, but again failed, and progressive atrophy of the optic nerve now commenced. The author believes the most probable proximate cause to have been hyperæmia or inflammation of the optic nerve behind the bulb.

The Effect upon the Heart of Preceding Inhibition.

Dr. Brown-Séquard has, according to the *Lancet*, July 10th, 1880, made a large number of experiments upon rabbits and young cats, on the effect of inhibition on the action of the heart. After the introduction of a tube into the trachea he insufflated the lungs in two rabbits at the same time. He opened the thorax, divided the pericardium, and ascertained the frequency and force of the heart's action. In one of the animals, that in which the heart was beating with least force, he galvanized the right vagus or both vagus nerves. Usually, after a variable time, the heart stopped. (Faradization of the vagus does not, in the rabbit, always arrest the heart.) When it recommenced to beat, he divided the two great arterial trunks which spring from it, in both animals, and then observed the action of the two hearts. That which had been inhibited always contracted much more frequently than that which had not. In five rabbits, for instance, in which there had been no inhibition, 1869 contractions were subsequently observed; and in five others which had been inhibited, the number of contractions was 3240. Moreover, the contractions were much stronger in the hearts which had been inhibited, than in the others. In one of the latter, during half the time of the observation, the contractions were confined to the right ventricle. In seven or eight minutes the hearts ceased to beat, but in two cases the contractions continued longer in the hearts which had been inhibited

than in those which had not. In three others the cessation in the two conditions was simultaneous. In the cats the same difference was observed. The contractions, after inhibition, were 292, as compared with 141 without inhibition. Should this effect be ascribed to the better nourishment of the heart during the period of nutrition? Dr. Brown-Séquard believes not, but promises another communication on the subject.

The Condition of the Uterine Mucous Membrane during Menstruation.

Dr. Moericke points out, in *Centralblatt für Gynäkologie*, June 19th, 1880, that menstruation is a physiological process. If the general theory that the mucous membrane of the uterus is partially or completely destroyed during menstruation were true, it would no longer be a physiological but a pathological process. Further, even in certain diseases of the endometrium, we find that the epithelial coating is retained. He thinks that the theory of degeneration of the mucous membrane at the menstrual periods arose from the fact that the preparations examined were not fresh, but exhibited *post-mortem* changes. The method which Dr. Moericke has adopted is to scoop off with a sharp curette a fresh piece of mucous membrane from the uterine surface. This he does at all stages of menstruation, before, during and after. In every case, both in the fresh and the hardened preparations, he has found the epithelial covering completely preserved. In some cases it was found to be ruptured or perforated by an underlying blood-extravasation, but in no place was it degenerating.

Nutritive Enemata.

Dr. Michelacci contributes an article on the subject of nutritive enemata, in *Lo Sperimentale*, June, 1880, in which he lays down the following general propositions. It is important to prepare the large intestine for the reception of nutrition by a previous injection of some simple substance. Whatever be the nature of the nutritive enema used, it should never be at a lower temperature than 37° or 38° Cent. (98.6° or 100.4° Fahr.). It is, as a rule, preferable to give a considerable number of small enemata rather than a few large ones. The injection should be administered slowly and cautiously, and conveyed as high up as possible, by means of a long tube. Each nutritive enema should be preceded by one of about two ounces of water, containing from four to eight drops of laudanum, in order to render the intestine more tolerant. In a clyster, alcohol should never be joined with peptone, as they are chemically incompatible. Fatty substances should be used sparingly, as they are difficult of absorption, and irritate the mucous membrane. Neutral or slightly alkaline enemata are frequently useful. In cases in which symptoms of irritation or enteritis supervene, the author recommends suspending the use of all further enemata, or, if this be not possible, then using opium freely, and selecting for injection only the less irritating substances.

The Treatment of Diphtheria.

Dr. Bloch states, in *La France Médicale*, that he has long employed as his principal treatment in diptheritic angina, dry cubeb pepper, applied to the throat by means of a brush, and has obtained from it excellent results. He orders the application to be made every hour, with the administration of liquid food, wine, bark, etc. The false membranes are detached and not reproduced. The application causes retching—sometimes vomiting.

These contractions of the pharynx are probably one of the elements of success. The absorption of the cubebs which the patients swallow also acts; this remedy has long been administered internally in membranous angina, and with satisfactory results. Lastly, the topical substitutive action has an important part in the happy effect of this treatment. It is easily used, and parents can themselves apply it to their children's throats. In catarrhal and pultaceous angina the same treatment succeeds marvelously —much better than alum, chlorate of potash, borax, tannin, etc.

The Normal Condition of the Eustachian Tubes.

We learn from the *Medical Press and Circular*, July 7th, 1880, at a recent meeting of the *Société de Biologie*, of Paris, M. Gellé expressed the opinion, the opposite of that recently put forward by M. Fournier, that in the normal state the Eustachian tube is closed. He gives the following reasons based on his experiments: If the tube is open a vibrating tuning-fork placed in the mouth should be heard even when the ears are closed. Now that is not the case. It is, nevertheless, possible to hear by the tube when the ears are closed, but only in cases where by a swallowing movement the tubes are opened. Hartmann found that to overcome the closure of the tube, and permit the air to penetrate to the tympanum, a pressure equal to from twenty to forty millimeters of mercury was

necessary. M. Gellé has found that from thirty to forty millimeters are required.

CORRESPONDENCE.

A Case of Malignant Tumor of the Axillary Space, with Post-mortem Examination.

ED. MED. AND SURG. REPORTER:—

On April, 23d, 1880, I was called to see Harvey A. Bushnell, aged 28; occupation, laborer; native of the United States, and married. Found him suffering with some diarrhœa, a dry, harassing cough, and some pain in his chest, on the left side, and apparently limited to the boundaries of the lower lobe of the lung on that side. At this time I noticed an immense tumor occupying the left axillary space, so large as to materially interfere with a careful physical examination of the chest. The following day, April 24th, I visited him again; found him more comfortable. At this visit he desired an opinion as to what was best to do with regard to the tumor. At this time the tumor measured about twenty inches in circumference, skin natural, except slight enlargement of the cutaneous veins, a peculiar, doughy, inelastic feel, not painful, and but slightly movable. He informed me that it had been eight years in reaching its present size, but there had been periods of activity and periods of rest in the time; and upon careful inquiry I learned that it had acquired its size mainly during two periods of activity, and that about one-half of the eight years was given to active growth and one-half to nearly, if not quite absolute rest. I advised him to go to prominent and experienced surgeons, and if agreeable with their advice and opinion, have it removed.

I did not again see the patient until May 29th, when he called at my office and requested me to accompany him to the city. Accordingly, on the first day of June I took him to the Long Island College Hospital, and placed him under the direction of Prof. J. S. Wight, of that institution. On the ninth day of June he returned home, and informed me that Prof. Wight, after the most rigid and careful examination, did not deem it prudent to attempt the removal of the tumor. The tumor now measured twenty-four inches in circumference and was rapidly increasing in size. The patient was now wasting rapidly, and in a few days after his return his cough grew worse, breathing became more and more difficult, and there began to be œdema of the feet.

About this time I found that over the region of the left lung the evidences of solidity became more and more distinctly marked. I also heard a peculiar cardiac murmur, which I had never heard before, and which I could not define.

Placing the stethoscope over the right side of the heart, it could be distinctly heard, resembling the bubbling sound produced by a fluid mixed with air passing through a tube. This sound was both systolic and diastolic, and it grew more and more distinct, and in proportion the dyspnœa became more oppressive, and the œdema of the feet increased.

Death took place early on the morning of July 16th, so suddenly, and so quietly as not seeming to rouse him from a quiet slumber.

At the autopsy I removed the axillary tumor, which weighed 9¾ lbs. and measured 27 inches in circumference. It had insinuated itself around the muscles and tendons approaching the shoulder joint, to some of which it was very firmly attached. It had extended itself entirely around the joint, and upward in front, underneath the clavicle. On section it presented the appearance of brain substance, except that it was not quite so white, very soft, and seemed to have formed in nodules, about the size of a pigeon's egg, the whole inner part being composed of this soft material, while their size and shape were preserved by interlacing bands of connective tissue. A few of these round masses were composed almost entirely of fat; and a few of chalky material. Opening the thorax, I found the left lung transformed into a mass resembling the tumor, only that it was harder and contained a greater quantity of chalky deposit. The heart slightly enlarged, and suspended by a pedicle half an inch in length, I found a growth the size of a small cherry, and attached to the margin of the tricuspid valve. I have this little growth in alcohol, and find that it begins to grow somewhat less, due, perhaps, to the solubility of the fat which it contains.

The liver was very large but not otherwise altered. Spleen the same. Mesenteric glands very much enlarged.

Under the microscope this large tumor presents both large and small round cells in great abundance, the multinucleated cells quite abundant, but the small round cells predominate. A few caudate bodies are seen.

The case excited no little interest here, and therefore I thought it might be of interest to the profession generally. As regards a diagnosis, I will only say that it seems to resemble sarcoma, of the medullary variety, while it presents some of the characteristics of encephaloid

Stephensbury, N. J. E. P. ILIFF, M. D.

Sanguis Bovinus Exsiccatus.

ED. MED. AND SURG. REPORTER:

In reply to numerous queries received from the profession, regarding the results obtained from the use of defibrinated blood, I have to reply as follows: Although this agent is but a recent introduction to therapeutics, it is already extensively employed, especially in hospital practice. Sufficient time has not elapsed, however, to determine its true therapeutic position, as only the accumulated results of experience and observation are to be depended upon as scientific evidence. Until, therefore, the accumulated evidence from the evolution of time can be obtained, it is impossible to furnish the profession with a truly scientific history.

The desiccated product suggested in my article, published in the "*Medical Record*" some months ago, was intended to utilize what then appeared a valuable product, and reports from hospital trial seem to fully justify the belief that it posesses important therapeutic value. Beneficial results usually follow its adminis-

tration, though in some instances results have not realized expectations. But as many have reported a success above anticipation, it is only fair to charge such failures to a fault in the expectation, rather than to the article in question. The immense sale would seem to be an argument in favor of its value, except for the fact that valueless articles have had an immense sale; still this will probably result in proving what worth to set upon it the quicker. The history of every new drug has been that of great popularity at first, a disappointment of hopes, followed by condemnation and rejection; but finally inherent merit has in most cases been recognized, followed by a healthy reaction. Such a history can always be traced to expectations exceeding reality, either on the part of the introducer or advocates of the use of the drug; instance, salicylic acid, etc.

To fix the position of defibrinated blood as a therapeutic agent, and especially that of desiccated blood, as soon as possible, it has been placed very extensively in the hospitals of New York, Philadelphia and Boston, and in the hands of careful and competent observers, for thorough and scientific test. As soon as reports are received from these institutions they will be furnished to the profession, through the columns of the medical press, and it is hoped that in this manner information can be quickly gleaned which shall show to what extent defibrinated blood can be relied upon in the treatment of disease.

For the convenience of those now employing the blood in practice, the experience of the New York City Hospital will be of use. In this hospital the desiccated article, dissolved in water, and with the addition of brandy and glycerine, is now employed. For this mixture the following is the formula: Desiccated blood, 6 drachms, dissolved in water, four fluid ounces, to which add one ounce each of brandy and glycerine. Of this solution the dose has been determined by the case. A teaspoonful every fifteen minutes is sometimes given, but the dose of a tablespoonful every three hours is usually preferred. A greater quantity at first is not readily digested by the stomach. This mixture is readily retained, even by the most delicate stomach, though other flavor has occasionally been added.

Per rectum, a mixture prepared from the same formula meets with favor, though but little difference is observed upon the omission of the brandy and glycerine, and a substitution of water in its place. Here, as by stomach, the idea has been to put as much blood inside of the patient as possible, in the shortest time. But it is found that more than three ounces injected every three or four hours is not advisable.

In the New York Hospital defibrinated blood is used, both as a sustaining and supporting measure, and also as a restorative agent. Its use is not confined to any one class of cases, but upon the same indications as meat. Patients to whom it is given have received much benefit from it, in some instances, while in others the results are not so marked.

Still more favorable reports are received from St. Francis' Hospital, New York, and Ward's Island. At each place is to be found the history of a patient whose life has been apparently saved by defibrinated blood, after the failure of all other means, and a refusal of the operation of amputation.

In some instances a disagreeable odor has been imparted to the fæces during the administration of defibrinated blood, either when employed for rectal alimentation or when given by mouth. This is generally because a greater quantity than can be assimilated is given at one time, and it can usually be readily corrected by diminishing and properly regulating the dose. In these cases no ill effect has been observed—at least, to my knowledge—and a continuance of the medication has resulted beneficially.

New York. F. E. STEWART, PH. G., M.D.

Prolonged Fasting.

ED. MED. AND SURG. REPORTER:—

The fast of Dr. Tanner recalls a singular case of abstinence that occurred in 1866, between May 19th and July 9th. I quote verbatim from notes taken at the bedside at the time:—

Mrs. Campbell, aged 66 years, widowed, of spare habit, living in Park Township, St. John County, in the family of David Hinebauch, has long been in feeble condition, sometimes with derangement of mental faculties, and for a long time having diarrhœa, from which last she had recovered.

Thursday, May 17th, she complained; Friday, May 18th, was worse; Saturday, 19th, she ate a light breakfast and went to bed, and at this time articulation became more and more difficult, until she could only say "yes" and "no."

On Tuesday, 22d, the right side was observed to be palsied, and so remained.

She took only water, firmly closing her teeth against everything else.

On Saturday, 21st, she ate two crackers, with water. After this she would not take anything, even water, until Saturday, June 23d, she took four or five spoonfuls of chicken broth and no more.

On Thursday, 28th, she became pulseless and cold, colder on the side not palsied, and so remained until Sunday, 30th.

On Thursday, 5th July, her bowels moved twice, and she began to eat and take medicine, but seemed to fail all the faster.

I saw her again on the 9th. Countenance cadaverous, pulse scarcely perceptible.

Subsultus.—She died on the 9th of July, having lived since her breakfast on May 19th, fifty-two days, forty-eight of which were without food of any kind except three crackers and five spoonfuls of chicken broth.

Her partial paralysis, her lethargic and semi-comatose condition, no doubt retarded waste of tissue and vitality, and seemed to simulate the condition of hibernation.

Mendon, Mich. EDWIN STEWART, M.D.

A telegram to one of our *Dailies* reports fifty-one deaths from yellow fever and thirteen from smallpox in Havana during the week ended July 31st.

News and Miscellany.

Astrological Pathology.

It appears, says the *Lancet*, July 10th, 1880, that the planets Jupiter, Saturn, Uranus, and Neptune will be in perihelion simultaneously in the fall of the year. This, we are told, has not happened before for more than 1800 years. Moreover, the "star of Bethlehem" will again make its appearance in the eastern horizon in the month of August. These celestial events will mark the completion of one great cycle of 1800 years and the beginning of another; and we are warned that the first decennium of this coming cycle will be ushered in by disastrous outbreaks of pestilence—a veritable saturnalia of death. We are to anticipate, it seems, a recurrence of the terrible pestilences which concurred with the earlier years of the Christian era, and of which the recent irruptions of plague are alleged to be the forerunners. The astrological forecaster is an Irishman, and it is gratifying to learn that Ireland will probably suffer less from the evils presaged by this portentous conjunction of planets than other lands. Indeed, he anticipates that, knowing this, strangers will flock for safety to Ireland, and by the encouragement thus given to the commerce of the island help to raise her out of the unfortunate slough of distress in which she now finds herself.

A Cure for Snake Bite.

Mr. Tremlett, Consul for Saigon, furnishes, according to the *Medical Press and Circular*, July 7th, 1880, some further notes respecting *hwang-nao*, which is said to cure the bite of the most venomous serpents, and has been successfully employed in curing cancer, and principally leprosy, in the treatment of which it has never given other than satisfactory results. The native physicians, Mr. Tremlett tells us, distinguish thirty-six kinds of leprosy, the most common attacking the feet and hands; it is considered to be hereditary, and is usually contracted by children at the age of puberty. After some generations, it has been noticed to confine itself to either the male or the female members of the family; the disease is considered contagious, which only would account for the number of lepers in Tonking.

Personal.

—John J. Reese, M.D., Professor of Medical Jurisprudence and Toxicology in the University of Pennsylvania, has been appointed Coroner's Physician.

—Prof. Gross has, at the earnest solicitation of many of his friends, gone to attend the Annual Meeting of the British Medical Association, in August at Cambridge. It is generally understood that Cambridge University will duly improve this opportunity, and confer upon our distinguished professor the title of Doctor of Laws; so that when he returns he will be LL.D., Cantab., as well as D.C.L., Oxon.

—Professor Wallace is also in Europe, for his health.

The Medical Profession in Japan.

According to the *Pacific Medical and Surgical Journal*, for July, 1880, the total number of physicians in Japan, in 1877, was 31,268, two-thirds of whom followed the Chinese system. The "Western" or regular practice was followed by 6600, of whom 200 had been qualified by examination, and upward of 4000 followed a mixed system. At the same date there were upward of 150 hospitals of all descriptions.

A sanitary bureau, which was established in 1873, has been in active and useful operation ever since.

Dr. Tanner's Fast.

At noon, August 3d, Dr. Tanner had completed his thirty-sixth day of living without food. His weight has now been reduced to 125½ pounds, and although he is every day growing more feeble, the general opinion now is that he will hold out the remaining four days. It is, however, a question whether getting over his fast may not prove a more difficult task than going through with it.

QUERIES AND REPLIES.

In reply to Dr. J. M. B.'s query with regard to the best treatment for orchitis, Dr. J. F. Duran, of Quincy, Ill., recommends the following, used as a wet compress:

℞.	Ammon. muriatis,	ʒss	
	Fl. ext. humuli,	ʒj	
	Aquæ,	ʒvij.	M.

Dr. F. R. Millard, of San Diego, Cal., says that if the case be gonorrhœal, the lancet should be used, or, if this be objected to, the scrotum should be thoroughly cauterized with nitrate of silver, until the tenderness has disappeared, when strapping will complete the cure.

Dr. H., of Pa., asks for the best treatment of *bunyons*.

Dr. A., of Miss., requests information as to the best treatment of *granular lids*, the patient being an otherwise healthy boy seven years old.

Ans.—We have found a saturated solution of sulphate of copper, applied thoroughly with a camel-hair brush, twice daily, to be a never-failing remedy; it acts better than the solid crystal so much in use.

MARRIAGES.

BARDIN—LEDNUM.—On July 20th, by Bishop Henry W. Warren, Almon Z. Bardin, M.D., and Annie M. Lednum, all of Philadelphia.

HART—GILBERT.—In this city, on the 27th inst., by the Rev. C. M. Wines, E. Stanley Hart and Jennie Stillé, daughter of the late William Kent Gilbert, M.D.

DEATHS.

BELCHER.—At City, Dutchess County, N. Y., on Sunday, July 25th, Dr. William N. Belcher, in the 83d year of his age.

BRUNER.—At Shippensburg, Pa., July 10th, Clari S., only child of Dr. W. S., and Clarinda L. Bruner, aged three months and fourteen days.

GRAVES.—At his residence in Long Island City, on Monday morning, July 26th, after a brief illness, Dr. Lewis Graves, in the 70th year of his age.

HEBERTON.—At Mt. Desert, Maine, July 25th, 1880, Dr. G. Craig Heberton, in his 58th year.

HERING.—In this city, on Friday, 23d inst., Dr. Constantine Hering, in the 81st year of his age.